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(21)Application number : 03-263120 (71)Applicant : TAIYO KAGAKU CO LTD

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(54) PRODUCTION OF THEANINE

(57)Abstract:

PURPOSE: To industrially and advantageously obtain the subject compound useful as a principal ingredient of flavor in GYOKURO (refined green tea) for flavorful substance, etc., of foods such as green tea by reacting a mixture of glutamine with ethylamine with a glutaminase under specific pH conditions.

CONSTITUTION: A boric acid buffer solution is added to a mixture of glutamine with ethylamine to regulate the pH to 9-12. A glutaminase obtained by culturing a microorganism (e.g. Pseudomonas nitroreducens IF012694) of the genus Pseudomonas, extracting the resultant product from the microbial cells and purifying the extracted solution by anion exchange column chromatography is then added to the regulated mixture and reacted, as necessary, in the presence of nickel, cobalt, cadmium or zinc at 30° C for 22hr. The resultant product is subsequently purified and separated from the reaction solution by solvent partition and various chromatographies and high-performance liquid chromatography to afford the objective theanine ( $\gamma$ -glutamylethylamide).

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